

What Is Claimed Is:

1. A method for the fabrication of a field-effect transistor comprising the steps of:
forming a semiconductor layer serving as an active layer on a substrate;
5 setting the substrate temperature at no higher than 100°C and forming a gate
insulating film on said semiconductor layer; and
heat treating said gate insulating film in an atmosphere containing water.
2. The method for the fabrication of a field-effect transistor according to claim 1,
10 wherein heat treatment of said gate insulating film is conducted at a temperature
of no less than 100°C.
3. The method for the fabrication of a field-effect transistor according to claim 1,
15 wherein the formation of said gate insulating film is conducted while heating of
said substrate is being prohibited.
4. The method for the fabrication of a field-effect transistor according to claim 1,
wherein the formation of said gate insulating film is conducted while said
substrate is being cooled to a temperature of no higher than room temperature.
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5. The method for the fabrication of a field-effect transistor according to claim 1,
wherein said gate insulating film is formed by a plasma CVD method.
6. The method for the fabrication of a field-effect transistor according to claim 1,
25 wherein said gate insulating film is formed by a microwave plasma CVD method.
7. A method for the fabrication of a field-effect transistor comprising the steps of:
forming a semiconductor layer serving as an active layer on a substrate;
setting the substrate temperature at no higher than 100°C and forming a first-
30 stage gate insulating film on said semiconductor layer; and
setting said substrate temperature at no less than 100°C and forming a
second-stage gate insulating film.

8. The method for the fabrication of a field-effect transistor according to claim 7, further comprising a step of heat treating said first-stage gate insulating film in an atmosphere containing water after the formation of said first-stage gate insulating film.

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9. The method for the fabrication of a field-effect transistor according to claim 8, wherein heat treating of said gate insulating film is conducted at a temperature of no less than 100°C.

10 10. The method for the fabrication of a field-effect transistor according to claim 7, wherein the formation of said first-stage gate insulating film is conducted while heating of said substrate is being prohibited.

11. The method for the fabrication of a field-effect transistor according to claim 7,
15 wherein the formation of said first-stage gate insulating film is conducted while said substrate is being cooled to a temperature of no higher than room temperature.

12. The method for the fabrication of a field-effect transistor according to claim 7,
wherein the formation of said first-stage gate insulating film is conducted by a
20 plasma CVD method.

13. The method for the fabrication of a field-effect transistor according to claim 7,
wherein the formation of said first-stage gate insulating film is conducted by a
microwave plasma CVD method.

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14. The method for the fabrication of a field-effect transistor according to claim 7,
wherein the formation of said second-stage gate insulating film is conducted by a
plasma CVD method using TEOS gas.

30 15. An electronic apparatus manufactured by the fabrication method of a field-effect transistor, the fabrication method comprising the steps of:
forming a semiconductor layer serving as an active layer on a substrate;
setting the substrate temperature at no higher than 100°C and forming a gate
insulating film on said semiconductor layer; and

heat treating said gate insulating film in an atmosphere containing water.

16. An electronic apparatus manufactured by the fabrication method of a field-effect transistor, the fabrication method comprising the steps of:

- 5 forming a semiconductor layer serving as an active layer on a substrate;
- setting the substrate temperature at no higher than 100°C and forming a first-stage gate insulating film on said semiconductor layer; and
- setting said substrate temperature at no less than 100°C and forming a second-stage gate insulating film.